

## ABSTRACT

An insulating ceramic made up of a plurality of partially filled shapes (e.g., 101), such as oblate spheroids, spheres, and shapes free of corners, is provided. Each  
5 partially filled shape may include an inner skeleton (e.g., 102) and an outer skin (e.g., 104). The inner skeleton may be stabilized at a higher temperature relative to the outer skin. The shapes may be disposed in a binding matrix. The thickness of the outer skin may be very thin in view of the support provided by the inner skeleton, thereby improving the abrasability characteristics of the ceramic.